

ORIGINAL

SUPERIOR COURT
YAVAPAI COUNTY, ARIZONA

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

2010 JUN 21 AM 10:09 ✓

IN AND FOR THE COUNTY OF YAVAPAI, ARIZONA
JEANNE HICKS, CLERK

BY: J. Rios

THE STATE OF ARIZONA,)
)
Plaintiff,)
)
vs.)
)
STEVEN CARROLL DEMOCKER,)
)
Defendant.)

No. CR 2008-1339

BEFORE: THE HONORABLE THOMAS B. LINDBERG
JUDGE OF THE SUPERIOR COURT
DIVISION SIX
YAVAPAI COUNTY, ARIZONA

PRESCOTT, ARIZONA
THURSDAY, MAY 27, 2010
2:05 P.M.

REPORTER'S PARTIAL TRANSCRIPT OF PROCEEDINGS

EVIDENTIARY HEARING

TESTIMONY OF PROFESSOR MICHAEL SAKS

ROXANNE E. TARN, CR
Certified Court Reporter
Certificate No. 50808

MAY 27, 2010
2:05 P.M.

EVIDENTIARY HEARING

APPEARANCES:

FOR THE STATE: MR. JOE BUTNER AND MR. JEFF
PAUPORE.

FOR THE DEFENDANT: MR. JOHN SEARS, MR. LARRY
HAMMOND AND MS. ANNE CHAPMAN.

MR. HAMMOND: Your Honor, if you are prepared
to proceed with the resumption of this morning's hearing, we
are prepared to call Professor Michael Saks.

THE CLERK: You do solemnly swear or affirm
under the penalty of perjury that the testimony you are about
to give will be the truth, the whole truth, and nothing but
the truth, so help you God?

THE WITNESS: I do.

THE COURT: Spell your last name, if you
would.

THE WITNESS: S-A-K-S.

MICHAEL J. SAKS,
called as a witness, having been duly sworn, testified as
follows:

DIRECT EXAMINATION

BY MR. HAMMOND:

Q. Good afternoon. Would you please give us your
full name again for the record here.

1 A. My name is Michael J. Saks, S-A-K-S.

2 Q. Professor Saks, where are you presently employed?

3 A. I teach at the Sandra Day O'Connor College of Law
4 at the Arizona State University.

5 Q. And what field do you teach in, please?

6 A. I mostly teach law and science, but also teach
7 criminal law, the substantive criminal law, evidence,
8 sometimes torts and a couple of times property, but the focus
9 is mostly law and science courses.

10 Q. What kinds of courses in the field of law and
11 science do you teach at -- can I just call it ASU?

12 A. Okay.

13 Q. I know it is against the rules there to call it
14 other than the Sandra Day O'Connor College of Law, but maybe
15 we can shorten it, as long as you don't tell anybody.

16 A. If the Court so orders, I could go with it.

17 Q. Maybe if it was the James Rogers School of Law we
18 would approach it slightly differently.

19 THE COURT: Probably not.

20 THE WITNESS: I teach a course called Law
21 Litigation and Science, which has a lot of social science
22 evidence, but its main goal is help the law students begin to
23 become conversant with the notions of empirical research, and
24 to read a lot of cases where courts have been presented with
25 empirical research. And another layer of that is to try to

1 understand the jurisprudence of what courts are doing with
2 cases where factual evidence, sometimes the kind that I am
3 sure comes into this court frequently, but also factual
4 evidence that is used for courts to find legislative facts to
5 make law. That is one course.

6 I have also taught courses in the law
7 pertaining specifically to forensic science, typically
8 seminars. And --

9 BY MR. HAMMOND:

10 Q. Give us a couple of the most recent, if you will,
11 kind of thumbnail of the course descriptions of the most
12 recent forensic science related seminars.

13 A. The one I taught this past Spring was focused on
14 forensic science and wrongful convictions, and was to a large
15 extent prompted by the National Research Counsel -- sometimes
16 it is called National Research Counsel, sometimes National
17 Academy of Sciences. It would be like talking about ASU, the
18 big umbrella, and the department or college within ASU would
19 be the smaller group. NRC is the smaller group.

20 Students read portions of that, read lots
21 of cases in which -- well, they read *Frye*. They read all of
22 the whole -- the *Daubert* trilogy. They read *Daubert* on
23 remand. They read lots of cases in which courts were
24 presented with challenges to the admissibility of forensic
25 science. It was a seminar, so and they each picked out

1 little projects and wrote papers on those and gave
2 presentations.

3 And I also had -- one day we had some
4 visitors from the real world. We had one of the managers or
5 directors from the Mesa crime lab. You were one of the
6 visitors from the outside world.

7 Q. From the real world?

8 A. That is what we call it in the university.

9 Q. We sometimes pause for objections, but hearing
10 none, you might continue.

11 A. And from the Attorney General's Office, we had
12 John -- I can't remember his last name.

13 Q. Todd?

14 A. John Todd, T-O-D-D. So that is kind of a sketch
15 of that.

16 And another course I have taught is one
17 in which the students pick -- again, it is a seminar. The
18 students select a legal policy problem and go find all of the
19 empirical research they can that might bear on that, and
20 they work in little teams, a law student with a graduate
21 student, and they review that research and write a paper on
22 that.

23 Q. How long have you been engaged in teaching?

24 A. I began teaching in Autumn semester of 1974.

25 Q. Have you been more or less continuously engaged

1 in -- primarily in law teaching?

2 A. Well, I began life as a professor of psychology,
3 where I did empirical research on legal policy issues. I
4 spent two years with the National Center for State Courts.

5 In my tenth year, I went off to law
6 school. Not for a JD. I went to Yale, which had a program
7 for people in other fields, who felt we could do what we are
8 already doing better if we studied law from the inside.

9 And shortly after graduating from Yale,
10 then I started getting calls from law schools to move from
11 psychology to law.

12 Q. And how long have you been at Arizona State?

13 A. Ten years.

14 Q. Your degree from Yale is under what designation?

15 A. It is called a Master of Studies in Law.

16 Q. What other degrees do you hold?

17 A. I have a PhD in social psychology with an emphasis
18 on research methodology and statistics. I have a Masters
19 Degree in the same field. And Bachelor of Science in
20 psychology, Bachelor of Arts in English.

21 Q. You provided to us, and we provided to the County
22 Attorney's office, a copy of your resume.

23 MR. HAMMOND: Your Honor, may I approach?

24 THE COURT: You may.

25 MR. HAMMOND: The copy that we have here has

1 been marked for identification as Exhibit 2237.

2 Q. Could you please identify that for us.

3 A. That is my CV.

4 Q. Can you glance at it for just a second and confirm
5 for us that it is a reasonably accurate, reasonably current
6 copy of your CV?

7 A. Looks pretty good, unless some pages fell out of
8 it during copying.

9 MR. HAMMOND: Your Honor, rather than go
10 through everything in here, I would just like to move its
11 admission only for illustrative purposes for this hearing.

12 MR. BUTNER: No objection.

13 THE COURT: Exhibit 2237 is admitted.

14 BY MR. HAMMOND:

15 Q. Professor Saks, this CV appears to contain a list
16 of articles and presentations that you have been involved in?

17 A. Yes.

18 Q. Looks like you have -- like ten of them are in the
19 time from 2009 forward.

20 A. It does look like there were about nine or ten
21 that were published in 2009.

22 Q. Most of those appear to be in the field of what we
23 might call forensic science or science and law. Would that
24 be fair?

25 A. Yes. I don't hold myself out to be any sort of

1 expert in forensic science, so I prefer to think of them as
2 articles that talk about the interface of forensic science
3 and law or other science and law.

4 Q. We are going to talk this afternoon about probably
5 three areas. And I know that you have pulled up some Power
6 Point slides in areas that might be of assistance to you in
7 illustrating your responses to our questions. And just to
8 give you and the Court a quick road map here, I would like to
9 talk to you first about science and forensic science, because
10 as you know that is what the hearing is broadly speaking
11 about. I would then like to visit with you some about the
12 work of the National Academy of Sciences and the work product
13 of the NRC.

14 You are -- well, let me ask you. You did
15 review the pleadings that were filed in connection with the
16 proceeding that we are engaged in today?

17 A. I did.

18 Q. You know that one of the issues raised and that we
19 have asked the Court to consider is the application of the
20 work product of the National Academy of Sciences over the
21 last couple of years and their report and the consequences of
22 that report?

23 A. Yes.

24 Q. So I do want to have you talk to us a little bit
25 about that as it is pertinent to this proceeding. You also

1 are familiar with *Daubert*. You mentioned that earlier from
2 the standpoint of the law and science community?

3 A. Yes.

4 Q. And are you also familiar with a bill that
5 recently was signed by the governor that is known either as
6 1189, which was the bill number, or 12-2203?

7 A. I am familiar with that.

8 Q. I may ask you a question or two about that from
9 the standpoint of the science and law community, and then I
10 want to talk to you a little bit about some of the testimony
11 that you have heard today.

12 You were here when both Mr. Gilkerson and
13 Mr. Hoang testified?

14 A. I was.

15 Q. Have you also had an opportunity to review the
16 interviews that those gentleman gave in connection with this
17 case?

18 A. I did.

19 Q. What else have you been able to review in
20 connection with our request for your assistance in this case?

21 A. Well, I did get my hands on a copy of Bodziak's
22 book, Footwear Impression Evidence.

23 Q. Bodziak is the name mentioned this morning by one
24 of the witnesses who testified here?

25 A. Yes. He is a former or perhaps even remains a

1 footwear examiner at the FBI.

2 Q. And what else have you reviewed, if anything?

3 A. Well, since footwear and tire impression evidence
4 is not a subject within forensic science that I have paid
5 much attention to, in addition to that I went to see what the
6 National Academy of Sciences report had to say about it.
7 They have a couple of pages that speak to that.

8 Q. Okay. Anything else before we launch off
9 here?

10 A. That is all I can think of and probably more than
11 enough.

12 Q. You know that one of the focuses of the motions
13 that we have filed in this case goes to the general topic of
14 forensic science and expert testimony in criminal cases?

15 A. Yes.

16 Q. I would like you to help us first by talking with
17 us a little bit about what it means in the context of our
18 criminal court systems around America to talk about science
19 in the courtroom. What denotes the concept of science in our
20 courts, and particularly in our criminal courts?

21 A. Well, it is an awfully broad question, so feel
22 free to stop me and reorient me.

23 MR. BUTNER: Judge, I am going to enter
24 objection at this point. It calls for a narrative on the
25 part of the witness.

1 I also note that I think this is going to
2 be -- from what I understand of this witness's testimony --
3 it is going to be irrelevant and immaterial. He has
4 indicated that he is not a forensic scientist. He is not an
5 expert in forensic science. He has not even paid much
6 attention to footwear and tire impressions.

7 It is my understanding that this
8 gentleman is going to be testifying by way of opinion,
9 apparently, concerning those areas of -- I think as he put
10 it -- interfaced between the law and science, and we are not
11 here for that reason. We are here to determine under
12 basically a *Daubert*-type standard, whether the evidence
13 presented by Mr. Gilkerson and the evidence presented by
14 Mr. Hoang is admissible in applying the standards of *Daubert*.

15 THE COURT: Mr. Hammond.

16 MR. HAMMOND: Your Honor, first of all,
17 Professor Saks is probably the most qualified person,
18 certainly in this part of the United States, to talk about
19 what the elements, what the real understanding of the
20 elements of what Mr. Butner calls the *Daubert* standard are.
21 And we saw examples of that all morning long today of people
22 using the words from *Daubert* or using the words from the
23 Arizona Statute testing error rates, peer review,
24 publication, as if those words might be words of common
25 knowledge and commonly understood. They, in fact, apparently

1 are not.

2 So our goal here is to have Professor
3 Saks help the government and the Court understand what those
4 words mean in the context of science and forensic science.
5 He does know a great deal about the field in which these
6 gentleman say they are a part. They say that they are a part
7 of the field of comparative examination or impression
8 comparison examination. This man has been working in that
9 field literally for decades, particularly in terms of what
10 standards we have to govern the admissibility of testimony in
11 those fields.

12 THE COURT: I take Mr. Butner's point, and I
13 accept it in the general terms that the Court is the one that
14 has to make the decisions in connection with those issues.
15 If there is something particular that you want to get -- if
16 you would get to the point of what it is in particular with
17 regard to the comments you have just made, I think we can cut
18 through some of that.

19 MR. HAMMOND: Well, we may be able to.

20 Q. And, Professor Saks, let me ask you to do it this
21 way. I would like to go directly to the *Daubert* terms, as
22 they have been applied here in court today and in the
23 interviews that you have read, and as those terms are used in
24 1189. And there are four or five of them that I would like
25 you to talk to us about.

1 MR. BUTNER: Judge, I am going to note an
2 on-going objection. What Mr. Hammond, apparently, as I
3 understand his question, is asking this witness to do is
4 explain the words in the *Daubert* opinion to the Court.

5 Well, that is not proper subject matter
6 for expert witness testimony or opinion. Rather, that is
7 something that is the subject matter of American
8 jurisprudence, so to speak, and judicial decisions that
9 elaborate and more fully explain their prior decisions.
10 Stare decisis, I think, is what they call that stuff.

11 And this gentleman has indicated that
12 although he is a law school professor, it sounds to me as if
13 he hasn't clearly stated he is a lawyer or a judge. I don't
14 think he is actually either. I think he is a psychology
15 professor with special emphasis on statistics.

16 THE COURT: Mr. Hammond.

17 MR. HAMMOND: Your Honor, we anticipated
18 Mr. Butner's objection, and I think we ought to be clear
19 about it.

20 We understand that the ultimate decision
21 that this Court has to make is a legal decision, and we are
22 not here to ask Professor Saks to give us a legal opinion.
23 But there are phrases and words that are used throughout this
24 field that have dominated the work of the National Academy
25 for the last few years, and that dominate the statute that

1 has recently been passed.

2 Those words were bandied around this
3 courtroom this morning as if people knew what they meant,
4 including Mr. Butner. And I think we are entitled to hear
5 from somebody in the field, who has worked on this topic,
6 about what these words mean to scientists who testify in
7 court. And on that topic, I think he is extraordinarily well
8 qualified.

9 THE COURT: In terms of those sorts of
10 definitions, I will give you some leeway in making your
11 record, but I also recognize that the Senate Bill 1889 --

12 MR. BUTNER: 1189.

13 THE COURT: Thank you. 1189 is not effective
14 as of yet, and still have to deal with the ramifications of
15 that issue.

16 Proceed. I will give him some leeway. I
17 will show the State's objection, in general, to the testimony
18 of a law school professor in the area of making comments
19 about forensic science, but I will give you some leeway to
20 make your record on that.

21 MR. HAMMOND: Your Honor, you understand our
22 view on this statute is that it is effective, technically, in
23 late July, but the argument that we have made to the Court
24 now in a couple of the pleadings, is that the heart of this
25 statute and the principles underlying it, when understood

1 through the lens of the scientist, need to be applied today,
2 both as a constitutional matter and as an Arizona law.

3 THE COURT: I understand that is your
4 position.

5 MR. BUTNER: Judge, I would again note an
6 objection, and if I could have this witness on a very brief
7 voir dire.

8 THE COURT: Go ahead.

9 VOIR DIRE EXAMINATION

10 BY MR. BUTNER:

11 Q. Professor Saks, sir, are you a scientist?

12 A. There are times when I am engaged in doing
13 science, and then I am a scientist. There are times when I
14 teach law, which is most of the time, and write legal
15 scholarship, and then I am -- I am not a lawyer, but I am a
16 legal scholar, so I am both of those things.

17 Q. I asked you a simple question. Are you a
18 scientist, and you said you are on a part-time basis, if I
19 understood your answer.

20 A. I am a scientist and a law professor.

21 Q. What type of a scientist are you?

22 A. I design and conduct empirical research on legal
23 policy matters, sometimes on forensic science, sometimes on
24 jury decision making, an array of subjects that are within
25 the legal system. But I bring the science -- I bring science

1 to them. If science is empirically testing, hypotheses,
2 assumptions, that is what I do within a legal context.

3 Q. You do that from the point of view of a social
4 psychology doctor; is that correct, sir?

5 A. Well, the research methodology and statistics
6 could be done by someone from virtually any field of
7 conventional science. It happens that I come out of the
8 field of social psychology.

9 Q. So you analyze these forensic science opinions
10 from a statistical point of view using your background with a
11 PhD in social psychology?

12 A. I don't understand the question.

13 Q. You indicated that you set up, I believe,
14 empirical studies of forensic science?

15 A. Would it help to give a concrete example?

16 Q. Well, I am asking you a question.

17 A. Well, I think the answer is yes, but I am not
18 sure. There is something in your tone that makes me think
19 that you don't know what you are asking me.

20 Q. I don't know what you do, sir, is what is in my
21 tone and I am asking you.

22 A. Would it be helpful to give an example?

23 Q. Yes. Why don't you tell us what you do.

24 A. Currently some colleagues and I have a grant from
25 the National Institute of Justice to test how lay people,

1 such as juries, react to different kinds of presentations of
2 forensic science. The language that is used, how well do
3 they come to understand what it is that the witnesses are
4 attempting to convey to them in what kinds of context.

5 So when I say we empirically study that,
6 we create scenarios. We create little trial scenarios and
7 present them to mock jurors. We systematically,
8 experimentally vary the kind of information they are getting.
9 We vary the kinds of forensic science. We vary the degree to
10 which the evidence links the defendant to the crime scene,
11 and then give questionnaires to the jurors, the mock jurors,
12 which allows us to assess how well they understood the
13 information they were getting in the trial.

14 Indeed, we did a study -- I was asked a
15 few years ago --

16 Q. Excuse me, sir. You are embarking on a narrative
17 again. I have to interrupt you for just a moment.

18 So you are saying you do studies on how
19 well jurors understand what witnesses testify to from an
20 expert point of view?

21 A. That was one example. It was not a narrative.

22 MR. BUTNER: Thank you.

23 Judge, that has nothing to do with what
24 we are here for today. Okay. This is just opening the door
25 to this particular gentleman, apparently, embarking on a

1 critique of forensic science and also presenting the views
2 contained in the National Academy of Science publication,
3 apparently of which he was a part, concerning scientific
4 evidence, forensic evidence, and presentation in the courts.

5 That is not what we are here for. We are
6 here for an analysis under, in essence, the standards in
7 *Daubert* as to whether the testimony of Mr. Gilkerson and
8 Mr. Hoang is admissible, applying legal standards, not social
9 science standards.

10 THE COURT: Mr. Hammond.

11 MR. HAMMOND: Your Honor, as we have said
12 several times both in writing and in here, the standards do
13 need to be appreciated and understood. There has been a
14 revolution in this country in the last few years that
15 surrounds a very few important critical words, and we think
16 those words ought to be understood by the State and by the
17 Court, and that is why we have asked this man to come and
18 give us the benefit of his experience and to apply that
19 experience in the context of the testimony that the State
20 would have introduced as expert testimony in this case. That
21 is what I intended to ask him about.

22 THE COURT: As I say, I will allow you to make
23 your record. Overrule the objection, but let's get on with
24 it.

25 MR. HAMMOND: Your Honor, I am not the one who

1 has slowed this down.

2 THE COURT: Well, I think my comment that the
3 testimony is, I think, purportedly of an expert in a field
4 that relates law to forensic science, that in and of itself
5 is not bearing directly on the question of whether I should
6 admit or not admit the testimony of Mr. Gilkerson or
7 Mr. Hoang, other than giving me an advisory opinion about
8 whether I should do that or not, and I don't think that is
9 the proper role for testimony.

10 MR. HAMMOND: Let's explore that, Your Honor.

11 One of the concepts that dominates the
12 debates over the *Daubert* standard is the concept of testing.
13 And you have heard testimony this morning --

14 MR. BUTNER: Objection to the form of the
15 question, Judge. We have a long, leading sort of a question
16 here from Mr. Hammond.

17 THE COURT: It is foundational. Overruled.

18 DIRECT EXAMINATION RESUMED

19 BY MR. HAMMOND:

20 Q. Let's talk about what the concept of testing means
21 in the field of forensic science as it applies to expert
22 testimony.

23 A. Well, testing is the essence of all science. If
24 we want to focus on forensic science, any assumptions, any
25 hypotheses that a field makes, in a scientific culture what

1 scientists try to do is to be as critical of their own ideas
2 as they can, and they seek to test their own hypotheses.
3 There are a number of forensic sciences that used to come
4 into court quite regularly, which subsequently were withdrawn
5 having been finally tested empirically and found not to
6 produce reliable results. I am thinking of bullet lead
7 comparison evidence. I am thinking of voice spectrometry,
8 which you may see occasionally, but it basically has
9 disappeared from the scene, both of those as a result of
10 National Academy of Sciences studies.

11 In the field of fire and arson
12 investigation, there are something like close to two dozen
13 different indicators of arson, which were assumed for decades
14 to allow arson investigators, examiners, to distinguish
15 accidental fires from set fires, which eventually were put to
16 empirical tests.

17 And it might be helpful to the Court to
18 give a very quick example of what that means.

19 THE COURT: I don't particularly need that.

20 MR. BUTNER: Thank you. This is exactly what
21 I am talking about. It is irrelevant and immaterial, Your
22 Honor.

23 THE COURT: Mr. Hammond, next question.

24 BY MR. HAMMOND:

25 Q. This morning you may have heard Mr. Gilkerson

1 testify that he was a part -- his discipline was a part of a
2 scientific community. Do you remember him saying that this
3 morning?

4 A. I do.

5 Q. And that that scientific community was one in
6 which pattern evidence was evaluated. What is your
7 understanding of the concept of pattern evidence has a
8 separate scientific community?

9 MR. BUTNER: Judge, same objection. This
10 witness has clearly stated at the outset that he is not a
11 forensic scientist, not an expert in forensic science, and
12 yet he is asked to offer an opinion on something that he is
13 not an expert in.

14 THE COURT: Sustained.

15 MR. BUTNER: Thank you.

16 BY MR. HAMMOND:

17 Q. Let's talk about whether in your review in the
18 whole field that you have been involved in the last couple of
19 decades, and particularly in the field of impression
20 evidence, are you aware of any testing that has been done of
21 the underlying assumptions about shoe print and tire print
22 comparison?

23 A. Well, I am not -- I looked through this book by
24 Bodziak looking for studies that attempted to test
25 assumptions about how one engages in those comparisons and

1 reaches conclusions and saw virtually no --

2 MR. BUTNER: Excuse me. Objection.

3 Relevance. Lack of foundation.

4 THE COURT: Overruled. The answer will stand.

5 BY MR. HAMMOND:

6 Q. Have you also had an opportunity to review the
7 report issued by the National Academy of Sciences?

8 A. I have.

9 Q. Are you aware of the findings of that committee
10 with respect to the fields of comparison evidence, and
11 particularly shoe print and tire print comparison?

12 A. In general, with respect to pattern comparison
13 evidence, the report --

14 MR. BUTNER: Objection, Judge. This is --

15 THE COURT: What is the objection?

16 MR. BUTNER: Irrelevant and immaterial. He is
17 asking the witness to start --

18 THE COURT: Sustained.

19 MR. BUTNER: Thank you.

20 THE COURT: I just need a one-word objection,
21 please.

22 MR. BUTNER: Thank you.

23 BY MR. HAMMOND:

24 Q. Let's talk about the concept of peer review. You
25 are aware that the witnesses who testified here this morning,

1 at least Mr. Gilkerson testified that his work was subject to
2 peer review, because there was another person in his office
3 who he said apparently reviewed his work. Does that
4 constitute peer review as you understand that term in the
5 scientific community?

6 MR. BUTNER: Objection. Foundation.

7 THE COURT: Overruled. You may answer.

8 THE WITNESS: That is not the notion -- that
9 is not the meaning of peer review as it is used in the
10 sciences, nor as it was used by the Supreme Court in *Daubert*.

11 MR. BUTNER: Objection. Move to strike the
12 last portion of this gentleman's opinion, Your Honor.

13 THE COURT: Sustained.

14 BY MR. HAMMOND:

15 Q. What I think we ought to focus on, to help the
16 Court here, is how the concept of peer review is used in the
17 scientific community. Talk to us about what peer review
18 means.

19 A. Peer review is -- well, I think I would like to
20 ask a little leeway to link that to *Daubert*, because *Daubert*
21 follows -- *Daubert* tracks a scientific arm --

22 MR. BUTNER: Objection. Foundation.
23 Relevance.

24 MR. HAMMOND: Your Honor, I think because
25 *Daubert* --

1 THE COURT: Overruled.

2 MR. HAMMOND: Thank you.

3 Q. You may proceed.

4 A. *Daubert* talks about, as a pre-condition for
5 admission of expert testimony in the sciences, especially
6 *Daubert* was before *Kumho Tire*, so they were talking only
7 about, quote, science, empirical things. And they say it
8 should be testable and tested.

9 MR. BUTNER: Objection, Judge. What the
10 witness is doing is explaining the opinion to the Court.

11 THE COURT: Sustained.

12 MR. BUTNER: Thank you.

13 THE WITNESS: Peer review --

14 MR. BUTNER: Objection. There is no question
15 even before the witness.

16 THE COURT: There is a question.

17 MR. BUTNER: That was sustained.

18 THE COURT: You may go back to the question
19 that was originally asked.

20 BY MR. HAMMOND:

21 Q. The question I asked you is: Tell us what the
22 concept of peer review means in respect to the scientific
23 community.

24 A. When scientists test their ideas, test hypotheses,
25 they want to test them by designing studies which are capable

1 of validly testing the proposition. They critique those at
2 several stages. Peer review occurs at two stages. Actually
3 occurs at many stages.

4 If I design a study, I will show it to
5 colleagues. I will show it to other people and ask them to
6 critique the study.

7 MR. BUTNER: Objection. Engaging in a
8 narrative again, Judge.

9 THE COURT: Overruled.

10 THE WITNESS: When I go to publish that study,
11 the journal will send the article out for peer review. That
12 is for the purpose of the editor of the journal to get advice
13 on whether the study is well designed and capable of testing
14 what it set out to test.

15 After the study is published, there
16 continues to be peer review because it is out in the
17 literature and there will be criticism of the work or others
18 will follow the work, finding it to satisfy the criteria of
19 well designed research.

20 BY MR. HAMMOND:

21 Q. Why is that important in the scientific community?

22 A. They want every chance to get the correct answer,
23 to not believe things that are not true, to not test many
24 different aspects of things and be mistaken about some of
25 them and right about others.

1 Q. And are there examples in the comparison evidence
2 field where the lack of peer review has allowed erroneous
3 testimony to be offered in criminal cases?

4 A. Well, I think there have been --

5 MR. BUTNER: Objection. Leading.

6 THE COURT: Overruled.

7 THE WITNESS: Let's take microscopic hair
8 comparison, for example. Experts in microscopic hair
9 comparison had beliefs about when they could conclude that
10 two samples of hair, questioned and a known, shared common
11 source. The FBI did a study to figure out how often --

12 MR. BUTNER: Objection, Judge. We are going
13 down the narrative avenue again. It is not responsive to the
14 question. He is now talking about hair studies and so forth
15 in the FBI lab. The question was talking about peer review
16 directly and specifically.

17 THE COURT: One word objection.

18 MR. BUTNER: Foundation and relevance.

19 THE COURT: Sustained.

20 MR. HAMMOND: I asked you about whether there
21 are examples of un-peer reviewed work in the evidence
22 comparison field. And I understand from the Court's
23 sustaining of that objection that you are not to answer that
24 question.

25 Judge, am I reading your objection

1 properly?

2 THE COURT: Yes. It has to do with relevancy
3 and also going on with a narrative.

4 MR. HAMMOND: I can certainly break this down
5 into smaller questions.

6 THE COURT: If you shorten up the questions, I
7 presume that the objections would be shorter as well.

8 MR. HAMMOND: Let's try it.

9 Q. What is the relevance of requiring peer review?

10 A. To make sure that the studies that are trying to
11 make sure that the field's beliefs are correct, are well
12 designed studies.

13 Q. What is the relevance of the requirement that
14 there be publications in any scientific field?

15 A. The purpose of the publication is to get -- partly
16 to get -- well, the main reason is to get the knowledge
17 contained in the studies out into the world. If those
18 studies are correct, people in that field want to know about
19 them. You wouldn't want your cancer surgeon to not know what
20 the research shows. But it is also an opportunity for the
21 world to critique the studies and find the flaws and then
22 discount the asserted conclusions.

23 Q. What is an error rate? What does that phrase mean
24 in the world of science?

25 A. In every empirical study, you get empirical

1 findings. They are in a section called "results." Sometimes
2 when you are testing the accuracy of something, could be the
3 accuracy of a new technology for seeing what's going on in a
4 person's body, it could be a new technique in forensic
5 science. They tried out different techniques for how to make
6 comparisons.

7 MR. BUTNER: Objection. He is embarking on an
8 area he's already testified he is not qualified to testify
9 about, Judge. Foundation. Irrelevant.

10 THE COURT: Sustained.

11 Get back to the question, please.

12 BY MR. HAMMOND:

13 Q. What is the --

14 A. Error rates, the meaning of error rates.

15 You look to see how often a process,
16 which include a human being examining something, reaches
17 correct or incorrect answers under varying conditions and
18 circumstances, each of which will produce results, and you
19 could call those error rates.

20 Q. This morning you heard Mr. Gilkerson from the FBI
21 crime lab say that he had no errors, had a zero error rate.
22 And he told you that he had a zero error rate because, at
23 least in part, of proficiency testing.

24 What is your understanding of the
25 relationship between error rates as that term is understood

1 in the scientific community and the kind of proficiency
2 testing that we heard about this morning?

3 A. Well, the proficiency tests, and I have looked at
4 many of them, produce results. Some people get them right,
5 some get them wrong, some give inconclusives. There are
6 articles in forensic science that summarize those correct and
7 incorrect conclusions. It could be a simple percentage.

8 What percentage of the examiners who took
9 the test got it right? So, if you have 150 examiners out of
10 the world that took a particular test, you could figure out
11 how many got it right or wrong. That may not be an inherent
12 error rate in the technique, but it tells you how often
13 examiners looking at something like that get it wrong.

14 As to an individual examiner who says, I
15 have taken five, ten, eleven of these tests, they are simply
16 presented with evidence much as they would receive in their
17 casework. They -- let's say someone gets every single one of
18 those correct. That could be because the test is
19 inadequately challenging. You make a test hard enough,
20 everyone will get it wrong. You make it easy enough,
21 everyone will get it right. Let's assume it is perfectly
22 well-designed test.

23 MR. BUTNER: Objection. Foundation.
24 Narrative. Irrelevant.

25 THE COURT: Overruled.

1 THE WITNESS: Then a scientist or statistician
2 would want to put error bars around that result, which
3 reflect the fact that it is a small sample.

4 BY MR. HAMMOND:

5 Q. The statute and the cases, and I am not asking you
6 for a legal opinion, but they talk about the importance of
7 having error rates, or at least having studies of errors in
8 any field where expert testimony will be admitted at trial.
9 Why is that important in the scientific community?

10 A. Within the scientific community, it is important
11 because that has led to the elimination of some sub-areas of
12 forensic science. They ought to want to know themselves --

13 MR. BUTNER: Objection. Foundation. He is
14 offering opinion on forensic science, again, Judge.
15 Irrelevant, too.

16 THE COURT: Mr. Hammond.

17 MR. HAMMOND: Your Honor, Professor Saks is a
18 well-known expert in the field of forensic science as it is
19 practiced in our courts. One need not be a forensic
20 scientist as such to be someone trained and have expertise in
21 this particular field, and that is why he is here. Indeed,
22 it is because of the forensic scientists who had no training
23 that we have much of the problems that we have with the
24 admission of expert testimony today.

25 THE COURT: Mr. Butner.

1 MR. BUTNER: Mr. Saks is a well-known
2 commentator on forensic science, with articles going back
3 many years where he has written articles about all kinds of
4 things; handwriting, jury behavior, social psychology as
5 applied to juries, psychologists as law professors, all sorts
6 of things. He is a commentator on all of these things. He
7 is not a forensic scientist. He is not qualified as a
8 forensic scientist to offer those kinds of opinions. He
9 writes articles about forensic scientists.

10 THE COURT: Overruled.

11 THE WITNESS: As a point -- can I just say I
12 have done such --

13 MR. BUTNER: There is no question.

14 THE COURT: There was a question. Restate it.

15 MR. HAMMOND: Let me go back.

16 Q. The objection that you heard this afternoon is
17 that you are not a forensic scientist, and therefore, are
18 unqualified to assist the Court in understanding the
19 application of forensic science and on course. Do you have a
20 response to that?

21 A. May I give an analogy? If I were a
22 statistician --

23 MR. BUTNER: Objection. Narrative.
24 Relevance. Foundation.

25 THE COURT: Overruled.

1 THE WITNESS: Think of me as a statistician
2 who looks -- sometimes I do my own studies. Often I look at
3 other studies that have been done. Sometimes I write
4 articles critiquing the fact that there have been few or no
5 studies in a field, that it simply asserts ipse dixit. If a
6 group of doctors in a particular area would not be unhappy
7 about having a statistician come and talk to them about what
8 the body of research relevant to their field teaches them
9 about what they are getting right and what they are getting
10 wrong.

11 BY MR. HAMMOND:

12 Q. When we talk about the kind of testimony that the
13 State would wish to offer in this case, you heard this
14 morning that they wish to offer testimony that they will
15 describe as expert testimony from someone who has done a
16 database search. You heard that testimony?

17 A. Yes.

18 Q. And you read the interviews with respect to that.

19 Do you have experience in the field of
20 scientists and experts who do database searches as part of
21 their scientific discipline?

22 A. I am aware of such work. I have not gotten
23 involved in that.

24 Q. You haven't done it yourself. I understand that.
25 But you have been involved in the field of science where --

1 MR. BUTNER: Objection. Leading.

2 THE COURT: Overruled.

3 BY MR. HAMMOND:

4 Q. -- where witnesses base their testimony on the
5 search of databases?

6 A. I am aware of them. I haven't done enough -- I
7 haven't looked in that area enough to be able to comment
8 intelligently.

9 MR. BUTNER: Objection. Foundation.

10 THE COURT: There is no question. Overruled.

11 MR. BUTNER: Continuing objection to inquiry
12 along this line. He just said he is not an expert in that
13 area. He just kind of looked into that area, Judge. That is
14 what I am talking about.

15 THE COURT: All right.

16 BY MR. HAMMOND:

17 Q. Professor Saks, in the testimony this morning, you
18 heard Mr. Gilkerson testify that he was able to reach a
19 conclusion that one pair of shoes was similar or most closely
20 approximated a pair of shoes he saw on a database?

21 A. Yes.

22 Q. You heard that testimony this morning.

23 In your experience in this field, if your
24 goal is to make sure that you have reliable, testable
25 results, is this forensic science that ought to be admitted

1 in a court of law?

2 MR. BUTNER: Objection.

3 THE COURT: Sustained.

4 BY MR. HAMMOND:

5 Q. Did you find, in your examination of the testimony
6 offered in this field, deficiencies in the way in which the
7 database searches were described as being done?

8 MR. BUTNER: Objection. Foundation.
9 Relevance.

10 THE COURT: Overruled.

11 THE WITNESS: I can think of studies that
12 could be done to try to validate the best ways of doing
13 database searches, but I am not aware of those studies.

14 BY MR. HAMMOND:

15 Q. What about the completeness of the database as
16 described here by Mr. Gilkerson?

17 MR. BUTNER: Objection. Foundation.
18 Relevance.

19 THE COURT: Sustained.

20 BY MR. HAMMOND:

21 Q. In your work in the field of forensic science, you
22 have addressed the question of the more general standard of
23 providing expert testimony that will assist the trier of
24 fact; is that correct?

25 A. Please repeat that.

1 Q. You have looked for many years at the question of
2 what kinds of expert testimony will assist the trier of fact?

3 A. Yes.

4 Q. A lot of your work has been in that field?

5 A. Yes.

6 Q. Please tell us what touchstones you, as a
7 scientist, would find minimally necessary in order to have
8 expert testimony offered in a court of law that will assist
9 the trier of fact, as those terms have come to be used in
10 forensic science?

11 MR. BUTNER: Objection. Relevance.
12 Foundation.

13 Judge, we are not here to find out what
14 kinds of things out there could assist the trier of fact. We
15 are here on a *Daubert*-type hearing to determine the
16 admissibility of two witnesses' testimony.

17 THE COURT: Mr. Hammond.

18 MR. HAMMOND: Your Honor, I think if the
19 testimony of the witnesses this morning were understood in
20 the context of what is done in our courts to assist triers of
21 fact, I think we would find that this testimony does not
22 assist triers of fact but misleads them. That is one of the
23 purposes for asking someone who is familiar with terms in
24 this field and with the various comparison disciplines to
25 testify.

1 THE COURT: I will sustain as to the
2 particular question that was asked.

3 MR. BUTNER: Thank you.

4 BY MR. HAMMOND:

5 Q. Can you describe for us the -- and I will break it
6 down into smaller questions if it will assist you. But I
7 would like you to tell the Court a little bit about the work
8 of the National Academy of Sciences. We have a series of
9 things that have been filed in court, I think you have
10 probably seen all of them, talking about the work of the
11 National Academy.

12 So let's start back in about 2007, if you
13 will. Describe for the Court the circumstances that lead to
14 the creation of this National Academy of Sciences community.

15 MR. BUTNER: Objection. Relevance. And it is
16 hearsay, and it calls for a narrative on the part of the
17 witness. We are not here to find out about what went on with
18 the National Academy of Sciences.

19 THE COURT: Sustained.

20 MR. HAMMOND: Your Honor, are you concluding
21 that the work of the National Academy is not relevant, or
22 that this man doesn't know about it?

23 THE COURT: I am concluding that I don't have
24 a foundation for him to express his testimony at this point,
25 based on what you have inquired about so far.

1 MR. HAMMOND: Thank you, Your Honor.

2 Q. Let's talk about foundation then.

3 Have you followed from beginning to end
4 the work of the National Academy of Sciences that lead to the
5 report entitled "Strengthening the Justice System," or words
6 to that effect?

7 A. Well, I didn't really become aware of it until it
8 already existed, because I had no involvement in the National
9 Academy of Sciences report, except to be invited to be a
10 witness.

11 Q. You were invited to testify before the National
12 Academy?

13 A. Yes.

14 Q. It is actually not the academy itself; it is a
15 committee?

16 A. It is the Committee on Forensic Sciences or the
17 National Research Counsel of the National Academy.

18 Q. And who are the chairs of that committee?

19 MR. BUTNER: Objection. Relevance.

20 THE COURT: Sustained.

21 BY MR. HAMMOND:

22 Q. Did you, in fact, testify before the National
23 Committee?

24 MR. BUTNER: Objection. Asked and answered.

25 THE COURT: The objection took longer than the

1 answer would have. It has been answered.

2 BY MR. HAMMOND:

3 Q. The answer is yes?

4 A. Yes.

5 Q. Did you communicate with members of this
6 scientific community about that work as it has been going
7 forward to and through the publication of the report in
8 February of 2009?

9 MR. BUTNER: Objection. Relevance. Lack of
10 foundation.

11 This witness has testified he is not an
12 expert in forensic science. He is not even a member of that
13 scientific community, Judge.

14 THE COURT: Overruled.

15 THE WITNESS: The committee itself had public
16 hearings. The rest of its work, including drafting this
17 report, was kept under very tight wraps, and I had no
18 participation in any of that, other than being one of many
19 people who was invited to speak to them.

20 BY MR. HAMMOND:

21 Q. And then when the report was issued -- and I
22 understand there was a long period of time where there was
23 silence from the committee?

24 A. Yes.

25 Q. Where nobody knew publicly what the committee was

1 doing?

2 A. That's right.

3 Q. And then in February of 2009, what happened?

4 A. The long awaited report was issued. People began
5 to read it and react to it. Arizona --

6 MR. BUTNER: Objection. Relevance.

7 THE COURT: I have the answer. Next question.

8 BY MR. HAMMOND:

9 Q. How many -- was the committee report unanimous?

10 A. Yes, it was.

11 MR. BUTNER: Objection. Relevance.

12 Immaterial.

13 THE COURT: Sustained.

14 BY MR. HAMMOND:

15 Q. Did the work of the committee result in
16 conferences in the scientific and forensic science community
17 in the year-and-a-half since February of 2009?

18 A. Yes.

19 MR. BUTNER: Objection. Relevance.

20 Immaterial. Leading.

21 THE COURT: Overruled.

22 THE WITNESS: There have been many
23 conferences, many reactions because it is a very strong --
24 maybe denunciation is too strong a word. I can't think of a
25 good synonym, but it expressed great concern.

1 MR. BUTNER: Objection. Hearsay.

2 THE COURT: Sustained.

3 THE WITNESS: Shall I read from the report?

4 MR. HAMMOND: No.

5 Q. Professor Saks, as someone who is intimately
6 involved in the field of law and science, who is a member of
7 the faculty at Arizona State University College of Law, have
8 you been a first-hand observer of the reactions to and the
9 steps that have been taken within the forensic science
10 community since February of 2009?

11 A. I have attended -- I was invited to attend some
12 American Academy of Forensic Sciences meetings to participate
13 in some of those discussions. We held our own conference at
14 ASU with about 30 participants, including members of the
15 committee, members of the forensic science community, members
16 of the legal community.

17 MR. BUTNER: Objection. Foundation.
18 Relevance, and it's a narrative.

19 THE COURT: Overruled.

20 BY MR. HAMMOND:

21 Q. Was the conference that you just spoke about in
22 April of 2009?

23 A. Correct.

24 Q. And there have been conferences scheduled by the
25 American Academy of Forensic Scientists?

1 MR. BUTNER: Objection. Leading.

2 THE COURT: Sustained.

3 BY MR. HAMMOND:

4 Q. Have there been conferences scheduled and held
5 since the publication of the National Academy of Sciences
6 report?

7 MR. BUTNER: Objection. Leading.

8 THE COURT: Overruled.

9 THE WITNESS: There have been conferences,
10 many by judges, judicial conferences. The American Academy
11 of Forensic Sciences --

12 MR. BUTNER: Objection. Narrative.

13 Nonresponsive, Your Honor. Lack of foundation.

14 THE COURT: Overruled.

15 THE WITNESS: There have been conferences in
16 the legal community. There have been conferences -- well, it
17 is not so much conferences called especially for it, but
18 within the forensic science community, it appears that
19 meetings that already were scheduled --

20 MR. BUTNER: Objection. There is no question
21 even before him about what he is talking about now, Judge.
22 Narrative.

23 THE COURT: The answer was just interrupted by
24 an objection that was overruled. Finish your answer.

25 THE WITNESS: There was meetings already

1 scheduled to take place by forensic science organizations.
2 Understandably a focus of those was the National Academy
3 report.

4 BY MR. HAMMOND:

5 Q. Have you, in fact, written at least one article
6 yourself that appeared in the Judicature Magazine, the
7 publication of the American Judicature Society on this
8 subject and the subject of the report?

9 A. I wrote, essentially, a synopsis of the report for
10 Judicature.

11 Q. And that report was published sometime in the last
12 12 months?

13 A. December of 2009.

14 Q. You said that you also had spoken at or been
15 invited to attend some of these conferences that you have
16 spoken about?

17 A. That's correct.

18 Q. You talked about the seminar that they teach at
19 the Arizona State College of Law. In the course of that
20 seminar, have you spoken about the work of the National
21 Academy of Sciences and the report issued in 2009?

22 A. Yes, we did.

23 Q. From the standpoint of a scholar in the field of
24 law and science, can you please explain to the Court why it
25 is that that report is -- the NAS report -- is of critical

1 importance to people in your field?

2 MR. BUTNER: Objection. Relevance.

3 THE COURT: Sustained.

4 BY MR. HAMMOND:

5 Q. Are you familiar with the legislation that was
6 passed here in the month of May, signed by the Governor, with
7 respect to changing the standards for the admissibility of
8 evidence in criminal cases?

9 A. I have read it.

10 Q. Are the words used in that statute also words that
11 are used in topics discussed at length in the National
12 Academy of Sciences report issued in February of 2009?

13 MR. BUTNER: Objection. Relevance.

14 THE COURT: Sustained.

15 BY MR. HAMMOND:

16 Q. In your experience as a teacher and as a member of
17 the law and science community, is there a connection between
18 the words used in the Arizona state statute and the body of
19 forensic science concerns expressed by the National Academy?

20 MR. BUTNER: Objection. Relevance.

21 Foundation.

22 THE COURT: Overruled.

23 THE WITNESS: The language of the statute,
24 which to a considerable extent mirrors *Daubert* and the
25 re-advised Federal Rule of Evidence 702, is overwhelmingly

1 concerned with the validity of offerings by expert witnesses,
2 which in the sciences depends --

3 MR. BUTNER: Objection. Narrative. He is
4 engaged in offering an opinion on what the language means as
5 compared with *Daubert*. Not responsive to the question.

6 THE COURT: Overruled.

7 THE WITNESS: Which is what the NAS report is
8 all about.

9 BY MR. HAMMOND:

10 Q. You used the word "validity." Is that a term of
11 art that has a special meaning as it applies to comparison
12 evidence?

13 A. It is a term of art in science generally, which in
14 *Daubert* -- the *Daubert* opinion takes pains to use the synonym
15 "evidentiary reliability." Evidentiary reliability,
16 validity --

17 MR. BUTNER: Objection. Commenting on
18 *Daubert*, explaining the decision --

19 THE COURT: Sustained.

20 MR. BUTNER: Thank you.

21 BY MR. HAMMOND:

22 Q. Explain to us what the connection is between the
23 word "validity" and "reliability."

24 A. As scientists use those terms, reliability refers
25 to the ability for any kind of measuring instrument,

1 including a human being, to produce the same result each time
2 it measures the same thing. If you do not have reliability,
3 you can't have validity. If you do have reliability, you
4 still may not have validity. Validity refers to the ability
5 of that measuring instrument to measure what it purports to
6 measure.

7 Q. We have heard testimony here in the last -- today,
8 and you have read the interviews of people who intend to
9 testify as experts with respect to comparison evidence or
10 impression evidence. Is that correct?

11 A. Yes.

12 Q. Do you have an opinion with respect to whether
13 there has been any proof offered here of validity testing of
14 that work?

15 MR. BUTNER: Objection. Lack of foundation.
16 He is not a scientist in that field. He's already testified
17 about that, Judge.

18 THE COURT: Sustained.

19 BY MR. HAMMOND:

20 Q. You know what to look for in every forensic
21 science field when you are looking for validity and
22 reliability of testing. Have you seen any here?

23 MR. BUTNER: Objection. Foundation.

24 THE COURT: Sustained.

25 MR. HAMMOND: Okay.

1 Q. Let me ask you the same question with respect to
2 peer review, as you understand that term and as you described
3 it for us this afternoon. Have you seen any evidence here in
4 court or in the reports of the interviews that you read that
5 would constitute peer review as you understand that term?

6 MR. BUTNER: Objection. Foundation.

7 THE COURT: Sustained.

8 BY MR. HAMMOND:

9 Q. Let me ask you the same question with respect to
10 error rates, as you defined that term and as it is understood
11 in the forensic science and scientific communities. Have you
12 seen anything in this courtroom or in the readings that you
13 have done in connection to this proceeding that would
14 establish error rates in this court?

15 MR. BUTNER: Objection. Foundation.

16 THE COURT: Sustained.

17 MR. HAMMOND: Give me a moment.

18 (Whereupon, a discussion was held off the record.)

19 MR. HAMMOND: Your Honor, I do have a number
20 of other questions about the work of the National Academy of
21 Sciences and the report that they have issued and the
22 consequences of that report. But if the Court is not
23 prepared to hear anymore of that, then I don't have any
24 further questions.

25 THE COURT: Mr. Butner.

1 MR. BUTNER: Judge --

2 MR. HAMMOND: Your Honor, I probably should
3 have asked the question differently. Am I correct in
4 assuming that the Court is not interested in hearing anymore
5 about that topic?

6 THE COURT: I guess, in terms of what is
7 necessary in the hearing, I think I am constricted by what
8 the law directs me to do in terms of the legal precedent and
9 whether or not such questions such as whether or not the new
10 Arizona law should or should not be applied to the
11 circumstances of this case. In terms of having the witness
12 comment on the law or what the Court should do, I don't think
13 I should properly receive that testimony.

14 MR. HAMMOND: There are -- all I want to be
15 sure that we understand, Your Honor, is that there are
16 reasons why these words got into this statute from a
17 scientific standpoint and from the standpoint of people in
18 the law and science community, and those reasons relate very
19 closely to work done by the National Academy.

20 THE COURT: I think that the witness is
21 qualified to talk about his own scientific background, in
22 terms of social sciences and social psychology, statistical
23 studies and how that relates to any information presented by
24 any forensic scientist. But in terms of, in essence,
25 advising the Court what the law is or applicability of that

1 in the particular case, commenting on what other witnesses
2 have testified to or have talked about in their interviews, I
3 don't think that is a proper subject for commentary by the
4 witness.

5 MR. HAMMOND: I don't intend to ask him any
6 further questions about that, Your Honor, but there are four
7 concepts here that are of critical importance.

8 THE COURT: I am not trying to limit your
9 questioning with regard to those *Daubert*-type concepts, or as
10 applied through the Arizona law that becomes effective
11 probably during the course of the trial, with commenting in
12 his field of expertise with regard to that. So, if you think
13 that there is some additional information that I haven't
14 received that I ought to that would help me make a decision
15 on whether or not if one applies the statute or if one
16 applies *Daubert*, or alternatively *Frye*, to or any other
17 applicable legal theory to the presentation of the evidence,
18 I am willing to hear it.

19 MR. HAMMOND: I think that the --

20 THE COURT: Part of that may be Rule 702,
21 because I think both sides are at disagreement as to what
22 rule ought to apply to the evidence, prospective evidence
23 that is going to be presented.

24 MR. HAMMOND: I understand that is a legal
25 question.

1 THE COURT: That is a legal question. To the
2 extent that there is an overlap with the social scientists
3 that you think I need to have some additional definition for
4 making a decision with regard to those points, I am willing
5 to hear that.

6 MR. HAMMOND: Well, it seemed to us, and
7 before I am through examining Professor Saks, I would like to
8 be sure that the Court is comfortable with what the
9 scientific community understands when they hear phrases like
10 "peer review."

11 THE COURT: Yes, and I am not trying to limit
12 your questioning with regard to those things.

13 MR. HAMMOND: Well, then let's talk and we
14 will wrap up on this series of questions.

15 Q. When scientists talk about the concept of peer
16 review, let's make sure we have your best testimony while you
17 are here of what that phrase means.

18 MR. BUTNER: Objection. Asked and answered.

19 THE COURT: To some extent it was, but go
20 ahead and clarify. You may answer. Overruled.

21 THE WITNESS: The fundamental concern to which
22 that is aimed is the validity of research, proper research
23 design. Peer review is one tool for helping to ensure or to
24 evaluate the research design.

25 MR. HAMMOND: Sorry, Your Honor. Were you

1 about to ask a question?

2 THE COURT: No. I was making sure that my
3 transcript was still going.

4 BY MR. HAMMOND:

5 Q. As that term is understood in the scientific
6 community, does it constitute peer review for one office
7 worker to simply have his work reviewed by another person in
8 that office?

9 MR. BUTNER: Objection. Asked and answered.
10 Foundation.

11 THE COURT: Overruled.

12 THE WITNESS: In the larger scientific
13 community, it does not. I do appreciate that in the forensic
14 sciences they have come to use that term to describe what you
15 asked about.

16 MR. BUTNER: Objection. Foundation.

17 THE COURT: Overruled.

18 BY MR. HAMMOND:

19 Q. When you say you have come to understand that that
20 term is used in a different way in the forensic science
21 community than in the scientific community, explain to the
22 Court what you mean.

23 MR. BUTNER: Objection. Foundation, Judge.

24 THE COURT: Overruled.

25 THE WITNESS: Well, as we heard today, when a

1 colleague double-checks someone's report, that has come -- in
2 some crime labs that has come to be called peer review.

3 BY MR. HAMMOND:

4 Q. As you understand that term in the scientific
5 community, is it peer review or it is a misnomer?

6 A. The larger scientific community would certainly
7 not understand the term in that fashion, and it seems to have
8 become fashionable post *Daubert*.

9 Q. Fashionable post *Daubert* to what?

10 A. Among forensics scientists.

11 MR. BUTNER: Objection. Outside of his field
12 of expertise. Lack of foundation, Judge.

13 THE COURT: Overruled.

14 BY MR. HAMMOND?

15 Q. You can complete your answer.

16 MR. BUTNER: May I have this witness on voir
17 dire, Judge?

18 THE COURT: No, you will have cross.

19 THE WITNESS: Peer review has a very well
20 established meaning in the larger sciences. That is what the
21 Supreme Court in *Daubert* was talking about.

22 MR. BUTNER: Objection. Outside his field --

23 THE COURT: Sustained. I will strike the
24 reference to what the Supreme Court was or was not talking
25 about.

1 Go ahead.

2 BY MR. HAMMOND:

3 Q. The case itself will show what the Supreme Court
4 was talking about. What I would like you to do is just
5 complete your answer so we have it all in one place on what
6 the concept of peer review means to the scientific community.

7 MR. BUTNER: Objection. Asked and answered.

8 THE COURT: Overruled.

9 THE WITNESS: It refers to having one's
10 colleagues review research that has been submitted to
11 journals, published by journals and afterwards. It is the
12 process of the community critiquing its own products.

13 BY MR. HAMMOND:

14 Q. And if there had been in any field that kind of
15 peer review borne of publication and borne of the interchange
16 of ideas, would we be able to see it in the published
17 literature?

18 MR. BUTNER: Objection. Speculation.

19 Ambiguous. Vague. Irrelevant.

20 THE COURT: Overruled.

21 THE WITNESS: I am not sure what you are
22 asking.

23 THE COURT: Okay, so maybe it was vague. I
24 stand corrected.

25 MR. BUTNER: Thanks, Judge. Thank you,

1 Professor Saks.

2 THE COURT: Try again, Mr. Hammond.

3 BY MR. HAMMOND:

4 Q. How would a court know, how would anyone know,
5 whether a Court or a lawyer, anyone know whether a
6 discipline, a comparison evidence discipline had been
7 subjected to peer review?

8 MR. BUTNER: Objection. Foundation.

9 THE COURT: Overruled.

10 THE WITNESS: One would need to look at the
11 literature that is relevant to the task at hand -- to borrow
12 some more Supreme Court language -- the task at hand by the
13 witness who is being proffered in court, look at the
14 empirical research literature that is offered in support of
15 those techniques or opinions, then the Court is stuck with
16 the problem of evaluating the research which is what peer
17 review should help with.

18 BY MR. HAMMOND:

19 Q. So, in the disciplines that we typically talk
20 about and that you talk about in your class, would we be able
21 to go to some published source and find peer reviewed
22 articles on that topic?

23 A. Well, let's be clear. There are articles
24 published in forensic science. They appear in forensic
25 science journals, and those journals are, quote, peer review.

1 The question is do those studies ask questions about the
2 issue that the witness has come to court to talk about, and
3 are those studies of adequate quality to provide an answer?

4 Q. That is the question that we could all address if
5 we had those studies. If those studies had been brought into
6 this court in the field of shoe print comparison --

7 MR. BUTNER: Objection. Argument, Judge.

8 THE COURT: Sustained.

9 BY MR. HAMMOND:

10 Q. In the fields of science in which you have been
11 involved, would you expect to find that the critical analysis
12 underlying that field is contained in published literature
13 that you could look at?

14 A. In virtually any field one -- in virtually any
15 science one would care to look at, one would be able to find
16 a body of such research, and then the debate becomes how good
17 of a study and what do they show?

18 Q. That is my last question. If we had found that
19 literature, would scientists be able to debate the validity
20 of the conclusions in those published works?

21 A. Yes.

22 MR. HAMMOND: Thank you.

23 I have no further questions.

24 THE COURT: I think we probably ought to take
25 the break before we move on. So take a ten-minute recess.

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(Brief recess.)

THE COURT: Record reflects the presence of the defendant, his three lawyers, and the two prosecuting attorneys, and Dr. Saks is still on the stand.

Mr. Butner.

MR. BUTNER: State has no questions.

THE COURT: All right. May the Professor be excused then at this time?

MR. HAMMOND: He may, Your Honor.

THE COURT: Being no objections, you are excused from additional testimony. Thank you, Professor.

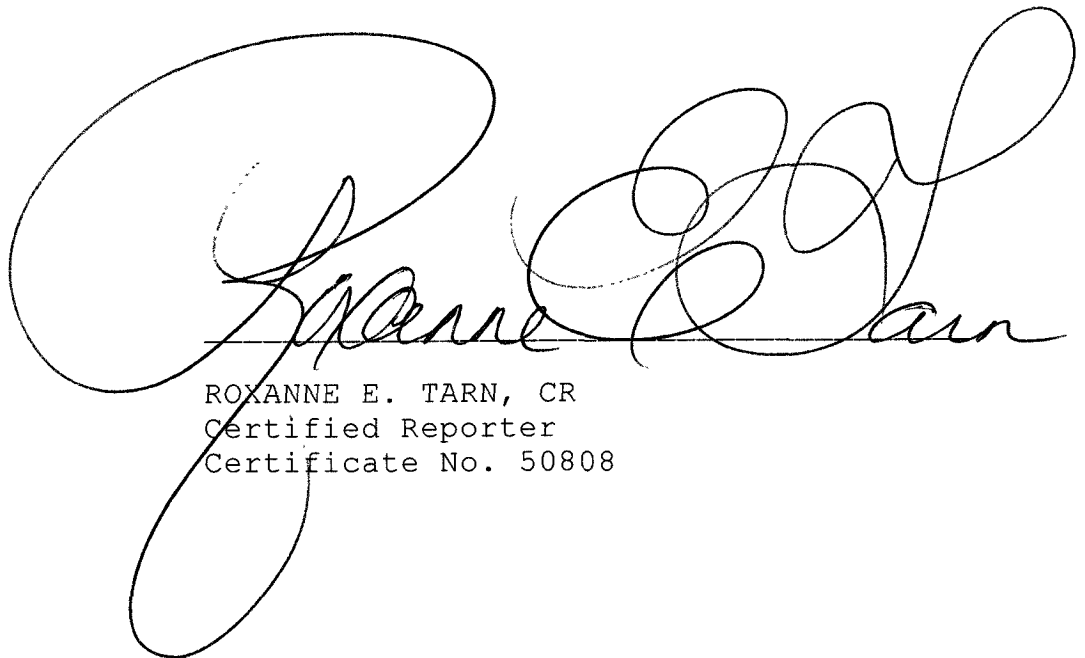
(Whereupon, these partial proceedings were concluded.)

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C E R T I F I C A T E

I, ROXANNE E. TARN, CR, a Certified Reporter
in the State of Arizona, do hereby certify that the foregoing
pages 1 - 55 constitute a full, true, and accurate transcript
of the proceedings had in the foregoing matter, all done to
the best of my skill and ability.

SIGNED and dated this 13th day of June, 2010.

A large, stylized handwritten signature in cursive script, reading "Roxanne E. Tarn", is written over a horizontal line. The signature is fluid and occupies a significant portion of the lower half of the page.

ROXANNE E. TARN, CR
Certified Reporter
Certificate No. 50808